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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
SULLIVAN, DANIELLE D	
ART UNIT	PAPER NUMBER
1616	
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01/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,276	ANDERSCH ET AL.	
	Examiner	Art Unit	
	DANIELLE SULLIVAN	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08). Paper No(s)/Mail Date *2/23/2007 and 3/30/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 6-12 are pending examination.

Claim Objections

Claims 6 and 8 are objected to because of the following informalities: Claims 6 and 8 comprise a table and do not recite the claim in a sentence format. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 8 recite a synergistic combination where the claims fail to end in a period. It is unclear if claim is intended to end or if additional limitations are intended. Therefore, the metes and bounds of the claim cannot be determined.

Claims 6 and 8 contains a table listing various mixtures. The listing in a table is indefinite because it is unclear if a Markush group is being claimed in the alternative format. The table renders the metes and bounds of the claim vague and indefinite. It is unclear if the claim includes all mixtures present or if just one mixture may be selected. All other claims are rejected as dependent on a rejected base claim. It is suggested

that components of the composition are recited in a proper Markush group (e.g., a combination selected from imidaclopid and clothiandin, imidacloprid and dinotefuran… or acetamiprid and nitenpyram).

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6-12 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for Mixture No. 1, 4 and 9 does not reasonably provide enablement for Mixture No. 2, 3, 5-8 and 10-21. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Claims 6-12 recite a synergistic combination comprising 21 different mixtures of compounds. Only 3 of the disclosed combinations demonstrate synergy.

Attention is directed to In re Wands, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing Ex parte Forman, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

1) the nature of the invention
2) the state of the prior art
3) the relative skill of those in the art
4) the predictability of the art
5) the breadth of the claims
6) the amount of direction or guidance provided
7) the presence or absence of working examples
8) the quantity of experimentation necessary

The instant specification fails to provide guidance that would allow the skilled artisan to practice the instant invention without resorting to undue experimentation, as discussed in the subsections set forth herein below.

The nature of the invention.

The claimed invention relates to a synergistic combination of two active compounds.

The state of the prior art & predictability of the art

It is generally accepted that a synergistic combination must be demonstrated in order to show unexpected results. Also, synergy can only be enabled for the specific combinations which show synergy relative to the concentration of each structure. Synergy is highly unpredictable in the art and can only be known once a particular combination is made.

The breadth of the claims

The claim recites 21 different synergistic mixtures. Hence the claims are broad.

The amount of direction or guidance provided.

There is only enough direction and guidance provided to show how to make synergistic mixtures of imidacloprid and clothianidin (1:1), imidacloprid and thiacloprid (1:1, 1:5 and 0.8:5) and clothianidin and thiacloprid (1:1). see Table A through Table N of the specification.

The presence or absence of working examples

The specification provides detailed evaluation of 3 synergistic mixtures No. 1, 4 and 9. However, synergy has not been demonstrated for Mixture No. 2, 3, 5-8 and 10-21.

The quantity of experimentation necessary & relative skill in the art

To determine how to make synergistic combinations of Mixture No. 2, 3, 5-8 and 10-21 would require undue experimentation for one skilled in the art There is no guidance provided to detail what ratios of the compounds are needed in order to obtain a synergistic combination. Also, there are not any factors that would lead one of relative skill in the art to be able to formulate a synergistic composition because synergy can only be known after the combination is made.

In conclusion, one of ordinary skill would not know how to make a synergistic combination of Mixtures No. 2, 3, 5-8 and 10-21 commensurate in scope with the claims as set forth.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara et al. (US 2003/0013684).

Applicant's Invention

Applicant claims a method of controlling insects, arachnids, or nematodes by contacting them with a synergistic mixture of two active compounds selected from the following combinations:

Mixture No.	First active compound	Second active compound
1	imidacloprid	clothianidin
2	imidacloprid	dinotefuran
3	imidacloprid	thiamethoxam
4	imidacloprid	thiacloprid
5	imidacloprid	acetamiprid
6	imidacloprid	nitenpyram
7	clothianidin	dinotefuran
8	clothianidin	thiamethoxam
9	clothianidin	thiacloprid
10	clothianidin	acetamiprid
11	clothianidin	nitenpyram
12	dinotefuran	thiamethoxam
13	dinotefuran	thiacloprid
14	dinotefuran	acetamiprid
15	dinotefuran	nitenpyram
16	thiamethoxam	thiacloprid
17	thiamethoxam	acetamiprid
18	thiamethoxam	nitenpyram
19	thiacloprid	acetamiprid
20	thiacloprid	nitenpyram
21	acetamiprid	nitenpyram

Claim 7 further limits the step of contacting to the seeds of plants.

Applicant claims synergistic combinations as disclosed above. Applicants claim a method of using the combinations for protecting seeds or growing plants by contacting them with the combinations. Claim 10 is directed to a seed treated with the combinations.

Applicants claim a method of making pesticides my mixing a combination according to the table, with one or more extenders and/or one or more surfactants.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Kawahara et al. teach an agricultural composition comprising an insecticide having nitromethylene, nitroimino or cyanoimino groups [0020]. The insecticides include imidacloprid, nitenpyram, thiacloprid, acetamiprid, thiamethoxam, clothianidin and dinotefuran [0010]. Kawahara et al. teach an agricultural composition comprising at least one selected from nitenpyram, acetamiprid and dinotefuran [0021-0027]. Kawahara et al. teach a process for controlling insects by applying a pesticidal composition having a nitromethylene, nitroimino or cyanoimino group to the stems and leaves of a plant or to the soil around the planting site [0031]. The chemical substance can be used to treat seeds by immersion or dressing [0062]. Examples of the chemical substance comprising nitenpyram 84%, acetamiprid 4200 ppm, thiamethoxam (4100) and dinotefuran (54000 ppm) are disclosed [0035]. Kawahara et al. teach the formulation may comprise surfactants, wetting agents and other additives [0049].

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Kawahara et al. does not disclose a synergistic combination as disclosed in the above table. However, Kawahara et al. teach a chemical substance comprising nitenpyram 84%, acetamiprid 4200 ppm, thiamethoxam (4100) and dinotefuran (54000 ppm).

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Kawahara et al. to formulate a combination of two of the disclosed compounds. One would have been motivated to include one of these combinations because Kawahara et al. teach that nitenpyram, acetamiprid, thiamethoxam and dinotefuran may be mixed with each other in order to formulate an insecticide for agricultural use. Therefore, synergy is an inherent property when any two compounds are used in combination with each other obtains unexpected results. The addition of another herbicide does not remove the presence of synergy.

Claims 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al. (US 2001/0046986).

Applicant's Invention

Applicant claims synergistic combinations as disclosed above 103(a) rejection. Applicant claims a method of controlling animal pest by contacting them with a synergistic mixture of two active compounds selected from the following combinations:

Mixture No.	First active compound	Second active compound
1	imidacloprid	clothianidin
2	imidacloprid	dinotefuran
3	imidacloprid	thiamethoxam
4	imidacloprid	thiacloprid
5	imidacloprid	acetamiprid
6	imidacloprid	nitenpyram
7	clothianidin	dinotefuran
8	clothianidin	thiamethoxam
9	clothianidin	thiacloprid
10	clothianidin	acetamiprid
11	clothianidin	nitenpyram
12	dinotefuran	thiamethoxam
13	dinotefuran	thiacloprid
14	dinotefuran	acetamiprid
15	dinotefuran	nitenpyram
16	thiamethoxam	thiacloprid
17	thiamethoxam	acetamiprid
18	thiamethoxam	nitenpyram
19	thiacloprid	acetamiprid
20	thiacloprid	nitenpyram
21	acetamiprid	nitenpyram

Applicants claim a method of making pesticides my mixing a combination according to the table, with one or more extenders and/or one or more surfactants.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Miura et al. teach a method of controlling flies that live in livestock pens or poultry houses by using an insecticidal composition as poisoned bait [0013] and [0048]. The insecticides include one or more compounds selected from imidacloprid, nitenpyram, thiacloprid, acetamiprid, thiamethoxam, clothianidin and dinotefuran [0016] and [0029]. The composition may include further additives and surfactants [0038-0042].

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Miura et al. does not disclose a synergistic combination as disclosed in the above table. However, Miura et al. teach that one of more compounds selected from imidacloprid, nitenpyram, thiacloprid, acetamiprid, thiamethoxam, clothianidin and dinotefuran may be used to control flies.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Miura et al. to formulate a combination of two of the disclosed compounds. One would have been motivated to include one of these combinations because Miura et al. teach that nitenpyram, acetamiprid, thiamethoxam and dinotefuran may be mixed with each other in order to formulate a pesticidal composition for use on animal pests. Furthermore, synergy is an inherent property where any two compounds are used in combination with each other obtain unexpected results. The addition of another herbicide does not remove the presence of synergy.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Andersch et al. (US 6,444,667).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danielle Sullivan whose telephone number is (571) 270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Danielle Sullivan
Patent Examiner
Art Unit 1616

/Johann R. Richter/
Supervisory Patent Examiner, Art Unit 1616